WHAT IS CLAIMED IS:

1. An isolated NGSP polypeptide, which is a polypeptide of *Neisseria spp*, with the proviso that the Neisseria spp. is not *N. meningitidis*, and has a molecular weight of about 40 kD to about 55 kD as determined in SDS polyacrylamide gel electrophoresis.

2. The NGSP polypeptide of claim 1, which has a molecular weight of about 44 to 53 kD.

3. The NGSP polypeptide of claim 1, wherein the *Neisseria spp.* is selected from the group consisting of *Neisseria ovis*, *Neisseria lacunata*, *Neisseria osloensis*, *Neisseria bovis*, and *Neisseria gonorrhoeae.*

4. The NGSP polypeptide of claim 3, which *Neisseria spp.* is *N. gonorrhoeae.*

5. The NGSP polypeptide of claim 1, comprising a sequence selected from the group consisting of SEQ ID NOs: 4, 6, 8, a sequence substantially homologous thereto, and a fragment thereof.

6. The NGSP polypeptide of claim 1 or a peptide fragment thereof, which specifically binds an antibody that specifically binds to a protein having the sequence selected from the group consisting of SEQ ID NOs: 4, 6, and 8.

7. A peptide fragment of the NGSP polypeptide of claim 1.

8. A peptide fragment of the NGSP polypeptide of claim 5.

9. A peptide fragment of the NGSP polypeptide of claim 6.

10. An antibody that specifically binds the NGSP polypeptide of claim 1 or a fragment thereof.

11. An antibody that specifically binds the NGSP polypeptide of claim 5 or a fragment thereof.

12. An antibody that specifically binds the NGSP polypeptide of claim 6 or a fragment thereof.

13. The antibody of claim 10, 11, or 12 which is a cytotoxic antibody that mediates complement killing of *Neisseria gonorrhoeae.*

14. An antigenic composition comprising the NGSP polypeptide of any of claims 1, 5, or 6 and a pharmaceutically acceptable carrier or diluent.

15. An antigenic composition comprising the peptide fragment of claim 7, 8, or 9 and a pharmaceutically acceptable carrier or diluent.

16. The antigenic composition of claim 14 additionally comprising one or more adjuvants or immunostimulatory compounds.

17. The antigenic composition of claim 15 additionally comprising one or more adjuvants or immunostimulatory compounds.

18. The antigenic composition of claim 16 further comprising one or more immunogens selected from the group consisting of lipids, lipooligosaccharides, proteins, attenuated organisms and inactivated whole cells of a pathogenic organism.

19. The antigenic composition of claim 18 wherein the lipid is a phospholipid.

20. The antigenic composition of claim 17 further comprising optionally one or more immunogens selected from the group consisting of lipids, lipooligosaccharides, proteins, attenuated organisms and inactivated whole cells.

21. The antigenic composition of claim 20 wherein the lipid is a phospholipid.

22. A vaccine composition comprising the NGSP polypeptide of any of claims 1, 5, or 6 and a pharmaceutically acceptable carrier or diluent.

23. A vaccine composition comprising the peptide fragment of claim 7, 8, or 9 and a pharmaceutically acceptable carrier or diluent.

24. The vaccine of claim 21 additionally comprising one or more adjuvants or immunostimulatory compounds.

25. The vaccine of claim 23 additionally comprising one or more adjuvants or immunostimulatory compounds.

26. The vaccine of claim 24 further comprising one or more immunogens selected from the group consisting of lipids, phospholipids, lipooligosaccharides, proteins, attenuated organisms and inactivated whole cells.

27. The vaccine of claim 25 further comprising one or more immunogens selected from the group consisting of lipids, phospholipids, lipooligosaccharides, proteins, attenuated organisms and inactivated whole cells.

28. A pharmaceutical composition comprising the NGSP polypeptide of any of claims 1, 5 or 6 and a pharmaceutically acceptable carrier or diluent.

29. A pharmaceutical composition comprising the peptide fragment of claim 7, 8, or 9 and a pharmaceutically acceptable carrier or diluent.

30. The pharmaceutical composition of claim 28 additionally comprising one or more adjuvants or immunostimulatory compounds.

31. The pharmaceutical composition of claim 29 additionally comprising one or more adjuvants or immunostimulatory compounds.

32. The pharmaceutical composition of claim 30 further comprising optionally one or more immunogens selected from the group consisting of lipids, lipooligosaccharides, proteins, attenuated organisms and inactivated whole cells.

33. The pharmaceutical composition of claim 32 wherein the lipid is a phospholipid.

34. The pharmaceutical composition of claim 31 further comprising optionally one or more immunogens selected from the group consisting of lipids, phospholipids, lipooligosaccharides, proteins, attenuated organisms and inactivated whole cells.

35. The pharmaceutical composition of claim 34 wherein the lipid is a phospholipid.

36. A pharmaceutical composition comprising the antibodies of claim 10, 11, 12 or 13.

37. An isolated DNA comprising a nucleotide sequence encoding the NGSP polypeptide of claim 1, 5 or 6 or fragment thereof.

38. An isolated DNA having the sequence of SEQ ID NOs: 1, 2, 3, 5, or 7, a fragment thereof, or the complement thereof.

39. An isolated DNA encoding an NGSP polypeptide which comprises a nucleotide sequence that hybridizes under high stringency conditions to the sequence of SEQ ID NOs:1, 2, 3, 5 or 7, or the complement thereof.

40. An isolated DNA which comprises a nucleotide sequence that hybridizes under high stringency conditions to the sequence of SEQ ID NOs:1, 2, 3, 5 or 7, or the complement thereof.

41. A pharmaceutical composition comprising the isolated DNA of any one of claims 37, 38, 39 or 40.

42. A method of producing an immune response in an animal comprising immunizing the animal with an effective amount of the NGSP polypeptide of any of claims 1, 5 or 6.

43. A method of producing an immune response in an animal comprising immunizing the animal with an effective amount of the peptide fragment of claim 7, 8, or 9.

44. Plasmid pTLZ-NgHtrA#2 obtainable from *E. coli* JM109 (pTLZ-NgHtrA#2), as deposited with the ATCC and assigned number PTA-470.

45. An antagonist which inhibits the activity or expression of the NGSP polypeptide of claim 5.

46. A method for identifying compounds which interact with an inhibit or activate an activity of the NGSP polypeptide of claim 5 comprising:

contacting a composition comprising the polypeptide with the compound to be screened under conditions to permit interaction between the compound and the polypeptide to assess the interaction of a compound such interaction being associated with a second component capable of providing a detectable signal in response to the interaction of the polypeptide with the compound; and determining the presence or absence of a signal generated from the interaction of the compound with the polypeptide.

47. A method for assaying for an agent that interacts with NGSP polypeptide comprising:

a. contacting a cell expressing NGSP polypeptide with an agent labeled with a detectable marker for a time sufficient to allow the agent to interact with the polypeptide;

b. washing the cells; and

c. detecting any marker associated with the cells,

in which any cell associated marker indicates that the agent interacts with the NGSP polypeptide and wherein any agent that interacts with NGSP indicates that the agent is useful as a diagnostic, prophylactic or therapeutic agent against *Neisseria* infection.